

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (withdrawn) A cylindrical expandable stent comprising:

a first loop containing section arranged in a circumferential direction and defining loops therein occurring at a first frequency;

a second loop containing section arranged in the circumferential direction and defining loops therein occurring at the first frequency;

a third loop containing section disposed in a generally circumferential space between the first loop containing section and the second loop containing section and coupling the first loop containing section to the second loop containing section for defining cells therebetween, the third loop containing section defining loops therein occurring at a second frequency that is greater than the first frequency.

2. (withdrawn) The stent according to claim 1, wherein the first and second loop containing sections are each part of a continuous circumferential member having a plurality of the first and second loop containing sections respectively and the third loop containing section is also part of a continuous loop having a plurality of the third loop containing sections coupled to first and second loop containing sections for defining the cells.

3. (withdrawn) The stent according to claim 1, wherein the first and second loop containing sections are each part of a continuous circumferential member having a plurality of the first and second loop containing sections respectively and wherein a plurality of the third loop containing sections each having one end connected to one of the first loop containing sections and another end connected to one of the second loop containing sections are provided.

4.(withdrawn) The stent according to claim 1, wherein the first loop containing section and the second loop containing section are 180 degrees out of phase with one another.

5.(withdrawn) The stent according to claim 2, wherein the first loop containing section and the second loop containing section are 180 degrees out of phase with one another.

6. (withdrawn) The stent according to claim 3, wherein the first loop containing section and the second loop containing section are 180 degrees out of phase with one another.

7-21 (cancelled)

22. (withdrawn) A cylindrical expandable stent comprising:

a plurality of first sinusoidal elements consisting essentially of a single sinusoidal pattern arranged in a circumferential direction, each of said first elements aligned on a common longitudinal axis to define a generally cylindrical stent body;

a plurality of second sinusoidal element consisting essentially of a single sinusoidal pattern arranged in the circumferential direction, each of said second elements aligned on a common longitudinal axis to define a generally cylindrical stent body;

each of said first and each of said second elements having a first wavelength;

a plurality of third sinusoidal elements disposed in a generally circumferential space between each of said first and each of said second elements and coupling said first to said second elements for defining cells therebetween, each of said third elements having a second wavelength that is shorter than said first wavelength.

23. (withdrawn) The stent according to claim 22, wherein said first and said second elements are 180 degrees out of phase with one another.

24. (withdrawn) The stent according to claim 22 comprising elements whose amplitude varies along each said element.

25. (withdrawn) A cylindrical expandable stent comprising:

a plurality of generally sinusoidal elements including first and second elements, said first and second elements aligned on a common longitudinal axis to define a generally tubular stent body, and

said first elements having a first wavelength and said second elements having a second wavelength, said second wavelength longer than said first wavelength.

26. (withdrawn) The stent according to claim 25 wherein said first and said second elements alternate over the length of the stent.

27. (withdrawn) The stent according to claim 26 wherein each of said first elements are connected to adjacent said second elements and none of said second elements are directly connected to one another.

28. (withdrawn) The stent according to claim 26 wherein each of said first elements have a first amplitude and each of said second elements have a second amplitude that is greater than said first amplitude.

29. (withdrawn) A cylindrical expandable stent comprising:
a plurality of sinusoidal elements, each of the elements consisting essentially of a single sinusoidal pattern, said elements aligned on a common longitudinal axis to define a generally cylindrical stent body, and

said elements including first and second elements, said first elements having a first wavelength and said second elements having a second wavelength, said second wavelength longer than said first wavelength.

30. (withdrawn) The stent according to claim 29, wherein said first and said second elements alternate over the length of the stent.

31. (withdrawn) The stent according to claim 30, wherein each of said first elements are connected to adjacent said second elements and none of said second elements are directly connected to one another.

32. (withdrawn) The stent according to claim 30, wherein each of said first elements has a first amplitude and each of said second elements has a second amplitude that is greater than said first amplitude.

33. (withdrawn) The stent according to claim 32 wherein adjacent said second elements are about 180° out of phase with one another.

34. (withdrawn) A cylindrical expandable stent comprising:

first sinusoidal elements arranged in a circumferential direction, said first elements aligned on a common longitudinal axis to define a generally cylindrical stent body;

second sinusoidal elements arranged in the circumferential direction, said second elements aligned on the common longitudinal axis to define the stent body;

said first and said second elements having a first wavelength;

flexible interconnections in a repeating sequence with each of said first and each of said second elements and disposed in a generally circumferential space between each of said first and each of said second elements, said first elements being coupled to said second elements through said flexible interconnections, said flexible interconnections including third sinusoidal elements having a second wavelength that is shorter than said first wavelength, each of said first elements being connected to adjacent said second elements and none of said first and said second elements being directly connected to one another.

35. (withdrawn) The stent according to claim 34 wherein said third elements are characterized by a first amplitude and said first and said second elements are characterized by a second amplitude greater than said first amplitude.

36. (withdrawn) The stent according to claim 35, wherein adjacent said first and said second elements are about 180° out of phase with one another.

37. (withdrawn) A cylindrical expandable stent comprising:

first sinusoidal elements consisting essentially of a single sinusoidal pattern arranged in a circumferential direction, said first elements aligned on a common longitudinal axis to define a generally cylindrical stent body;

second sinusoidal elements consisting essentially of a single sinusoidal pattern arranged in the circumferential direction, said second elements aligned on a common longitudinal axis to define the stent body;

said first and said second elements having a first wavelength;

flexible interconnections in a repeating sequence with each of said first and each of said second elements and disposed in a generally circumferential space between each of said first and each of said second elements, said first elements being coupled to said second elements through said flexible interconnections, said flexible interconnections including third sinusoidal elements having a second wavelength that is shorter than said first wavelength, each of said first elements being connected to adjacent said second elements and none of said first and said second elements being directly connected to one another.

38. (withdrawn) The stent according to claim 37, wherein said third elements are characterized by a first amplitude and said first and said second elements are characterized by a second amplitude greater than said first amplitude.

39. (withdrawn) The stent according to claim 37, wherein the flexible interconnections are displaced circumferentially along the stent.

40. (withdrawn) The stent according to claim 38, wherein adjacent said first and said second elements are about 180° out of phase with one another.

41. (withdrawn) A cylindrical expandable stent comprising:
a plurality of sinusoidal elements, said elements aligned on a common longitudinal axis to define a generally cylindrical stent body,

said elements including first and second sinusoidal elements, said first elements having a first wavelength, said second elements having a second wavelength, said second wavelength being longer than said first wavelength, and

said second elements forming an alternating sequence with said first elements, adjacent said second elements being connected together through said first elements without direct connection therebetween.

42. (withdrawn) The stent according to claim 41, wherein said first elements are characterized by a first amplitude and said second elements are characterized by a second amplitude greater than said first amplitude.

43. (withdrawn) The stent according to claim 41 wherein adjacent said second elements are about 180° out of phase with one another.

44. (withdrawn) A cylindrical expandable stent comprising:
a plurality of sinusoidal elements consisting essentially of a single sinusoidal pattern, said elements having alternating peaks and troughs aligned on a common longitudinal axis to define a generally cylindrical stent body, the peaks and troughs taking a generally longitudinal direction along the stent,

said elements including first and second sinusoidal elements, said first elements having a first wavelength, said second elements having a second wavelength, said second wavelength being longer than said first wavelength, and

said second elements forming an alternating sequence with said first elements, adjacent said second elements being connected together through said first elements without direct connection therebetween.

45. (withdrawn) The stent according to claim 44 wherein said first elements are characterized by a first amplitude and said second elements are characterized by a second amplitude greater than said first amplitude.

46. (withdrawn) The stent according to claim 44 wherein adjacent said second elements are about 180° out of phase with one another.

47. (withdrawn) A cylindrical expandable stent comprising:

first vertical sinusoidal elements and second vertical sinusoidal elements generally arranged in a circumferential direction to define a generally cylindrical stent body, said first and said second vertical sinusoidal elements alternating in sequence and having a first and a second frequency, respectively, and

each of said second elements having respectively a higher frequency than each of said first elements, said first and said second elements being coupled together in a sequence without any elements of the same frequency directly coupled together.

48. (withdrawn) The stent according to claim 47, wherein said first element is further characterized by a first amplitude and said second element is further characterized by a second amplitude less than said first amplitude.

49. (withdrawn) The stent according to claim 47, wherein adjacent said first elements are about 180° out of phase with one another.

50. (withdrawn) A cylindrical expandable stent comprising:

a first vertical sinusoidal element and a second vertical sinusoidal element, both elements consisting essentially of a single sinusoidal pattern and generally arranged in a circumferential direction to define a generally cylindrical stent body, said first and said second vertical sinusoidal elements alternating in sequence and having a first and a second frequency, respectively, and

each of said second elements having respectively a higher frequency than each of said first elements, said first and said second elements being coupled together in a sequence without any elements of the same frequency directly coupled together.

51. (withdrawn) The stent according to claim 50, wherein said first element is further characterized by a first amplitude and said second element is further characterized by a second amplitude less than said first amplitude.

52. (withdrawn) The stent according to claim 51, wherein adjacent first elements are about 180° out of phase with one another.

53. (withdrawn) A cylindrical expandable stent comprising:
a plurality of sinusoidal elements arranged in a circumferential direction, said elements aligned on a common longitudinal axis to define a stent body; and
a plurality of flexible interconnecting elements having first and second ends, said first and said second ends of each of said interconnecting elements extending from adjacent sinusoidal elements, said first and said second ends of each of said interconnecting elements displaced circumferentially along the stent.

54. (withdrawn) The stent of claim 53 wherein said flexible interconnecting elements comprise a plurality of sinusoidal second elements having a shorter wavelength than said first elements.